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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,389	11/25/2003	Thomas Redden Veariel	2003B103/2	8869

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EXAMINER

DEL SOLE, JOSEPH S

ART UNIT PAPER NUMBER

1722

DATE MAILED: 08/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/723,389

Applicant(s)

VEARIEL ET AL.

Examiner

Joseph S. Del Sole

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-72 is/are pending in the application.
- 4a) Of the above claim(s) 1-35 and 66-71 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 36-65 and 72 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Claims 1-35 and 66-71 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 6/8/06.

2. Applicant's election with traverse of claims 36-64 and 72 in the reply filed on 6/8/06 is acknowledged. The traversal is on the ground(s) that a search on all inventions would not be unduly burdensome. This is not found persuasive because the non-elected inventions require searches in classes and subclasses not required for the search for the claimed invention.

The requirement is still deemed proper and is therefore made FINAL.

Trademark Objections

3. The use of the trademark Inconel has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology. In the claims, the generic term must be used solely.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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5. Claim 72 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 72 is vague and indefinite because it is unclear whether it is a product claim (it is dependent on product claim 27) or an apparatus claim (its preamble and all its limitations are apparatus only). The claim will be treated as an apparatus claim only and its dependence must be amended for consistency.

Claim Objections

6. Claim 72 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 72 fails to include any product limitations and thus fails to further limit parent claim 27. As stated above, claim 72 will be treated as an apparatus claim.

7. Claim 65 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The limitation "retrofit part" does not structurally differentiate the apparatus from merely being a second plate, since "retrofit part" speaks to the method by which the second plate came into existence and not its structural qualities.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 36-38, 44, 47, 51-53, 56, 58-59, 62 and 65 are rejected under 35 U.S.C. 102(b) as being anticipate by Courval et al (5,204,045).

Courval et al teach a die plate having (Fig 3, #25) (a) an upstream face; (b) a downstream face; (c) at least one passage having a first opening in said upstream face whereby molten resin may be received and a second opening in said downstream face whereby molten resin may be extruded; and (d) a heater (Fig 3, #28) proximate said downstream face and proximate with said at least one passage at said downstream opening; the at least one passage is generally cylindrical and having a substantially uniform diameter from said upstream face to said downstream face (Fig 3); the heater is concentric with said at least one passage (Fig 3); the die plate is a monolithic die plate (Fig 3); die plate comprises a first plate having said upstream face and a second plate having said downstream face and said heater, said first and second plates fluidically connected by said at least one passage (the broadness of the claims shows that Courval et al reads on this, with #14 being the first plate and #25 being the second plate); the at least one passage passes through a portion of said heater, such that said portion defines the wall of said passage proximate said downstream face (an alternative embodiment of Courval et al reads on this, col 8, lines 9-11); the die plate comprises a

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material selected from brass, stainless steel, and Inconel.TM (col 2, lines 40-55); an extrusion die assembly having a die plate having at least one passage including an initial, upstream zone comprised of an opening for receiving a polymer melt having a bulk temperature, an intermediate zone for conveying said polymer melt, and a final, downstream zone terminating said extrusion die assembly at an exit opening whereby said polymer melt exits said extrusion die assembly, further comprising a heating means for said downstream zone whereby at least a portion of said polymer melt may be locally heated to a temperature greater than T (Fig 3); the heating means comprises a heater concentric with the extrusion orifice pattern (Fig 3); the heating means is proximate said exit opening; the passage is generally cylindrical and having a substantially uniform diameter from said opening for receiving a polymer melt to said exit opening (Fig 3); the die plate is a monolithic die plate (Fig 1) the die plate comprises a first plate having an upstream face and comprising said upstream zone and a second plate having a downstream face and said heater, said first and second plates fluidically connected by said at least one passage (see discussion above); the die plate comprises a material selected from brass, stainless steel, and Inconel.TM (col 2. lines 40-55); the second plate is a retrofit part (Fig 3).

10. Claims 36, 38, 40, 42, 47, 51, 52, 53, 54, 55 are rejected under 35 U.S.C. 102(b) as being anticipated by Bentivoglio et al (4,830,595).

Bentivoglio et al teach a die plate (Fig 1, #s 60 and 80) having (a) an upstream face; (b) a downstream face; (c) at least one passage having a first opening in said upstream face whereby molten resin may be received and a second opening in said

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downstream face whereby molten resin may be extruded; and (d) a heater (Fig 2, #s 64 and 84) proximate said downstream face and proximate with said at least one passage at said downstream opening; the heater is concentric with said at least one passage (Fig 2); an insulation material (Fig 2, spaces 86, 87, 66 and 67) contiguous with said heater and the die plate and concentric with said heater about said at least one passage proximate said downstream opening (Fig 2); an insulation material (Fig 2, spaces 66, 67, 86, and 87) concentric with said at least one passage and contiguous with at least a portion of said heating means, and contiguous with said at least one passage at said exit opening; the die plate is a material selected from brass, stainless steel, and Inconel.TM (col 5, lines 5-20, the Examiner notes that although in some parts aluminum may be preferred, steel is taught for all claimed parts of the die); an extrusion die assembly comprising a die plate having at least one passage including an initial, upstream zone comprised of an opening for receiving a polymer melt having a bulk temperature $T_{sub.melt}$, an intermediate zone for conveying said polymer melt, and a final, downstream zone terminating said extrusion die assembly at an exit opening whereby said polymer melt exits said extrusion die assembly, further comprising a heating means for said downstream zone whereby at least a portion of said polymer melt may be locally heated to a temperature greater than $T_{sub.melt}$ (Fig 2); the heating means comprises a heater concentric with the extrusion orifice pattern (Fig 1); the heating means is proximate said exit opening; the downstream zone further comprising an insulation material concentric with said passage and contiguous with at least a portion of said heating means and said die assembly (Fig 2); the downstream zone

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further comprises an insulation material concentric with said passage and contiguous with at least a portion of said heating means, and contiguous with said passage at said exit opening (Fig 2); the die plate comprises a material selected from brass, stainless steel, and Inconel.TM (see above).

11. Claims 36, 38-42, 44-55, 57, 59-65 and 72 rejected under 35 U.S.C. 102(b) as being anticipated by Dudley (4,123,207).

Dudley teaches a die plate having (Fig 4) having: (a) an upstream face; (b) a downstream face; (c) at least one passage having a first opening in said upstream face whereby molten resin may be received and a second opening in said downstream face whereby molten resin may be extruded; and (d) a heater (Fig 4, #s 410, 440, et al) proximate said downstream face and proximate with said at least one passage at said downstream opening; the heater is concentric with said at least one passage (Fig 4); the at least one passage passes through a portion of said heater, such that said portion defines the wall of said passage proximate said downstream face (Fig 4); having an insulation material (Fig 4, #s 815A and B) contiguous with said heater and said die plate and concentric with said heater about said at least one passage proximate said downstream opening; having an insulation material (Fig 4, #s 430 and 431) concentric with said at least one passage proximate said downstream face and forming at least a portion of said downstream face at said second opening; having an insulation material concentric with said at least one passage and contiguous with at least a portion of said heating means, and contiguous with said at least one passage at said exit opening (Fig 4); the die plate comprises a first plate having said upstream face and a second plate

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having said downstream face and said heater, said first and second plates fluidically connected by said at least one passage (Fig 4); having a plurality of said at least one passage and wherein said first and second plates are fluidically connected by each of said at least one passage (Fig 4); having a plurality of said at least one passage; the die plate comprises a material selected from brass, stainless steel, and Inconel.TM (col 3, line 60 - col 4, line 2 and col 5, lines 30-50); the insulation material is selected from high temperature plastics, machineable ceramics, ceramics which may be deposited by spray coating techniques, and ceramics which may be deposited by vapor deposition techniques (col 4, lines 20-30); an extrusion die assembly comprising a die plate having at least one passage including an initial, upstream zone comprised of an opening for receiving a polymer melt having a bulk temperature $T_{\text{sub.melt}}$, an intermediate zone for conveying said polymer melt, and a final, downstream zone terminating said extrusion die assembly at an exit opening whereby said polymer melt exits said extrusion die assembly, further comprising a heating means for said downstream zone whereby at least a portion of said polymer melt may be locally heated to a temperature greater than $T_{\text{sub.melt}}$ (Fig 4); having a heater concentric with the extrusion orifice pattern (Fig 4); the heating means is proximate said exit opening (Fig 4); the downstream zone further comprising an insulation material concentric with said passage and contiguous with at least a portion of said heating means and said die assembly (Fig 4); the downstream zone further comprises an insulation material concentric with said passage and contiguous with at least a portion of said heating means, and contiguous with said passage at said exit opening (Fig 4); the die plate comprises a plurality of said at least

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one passage (Fig 4); the die plate comprises a first plate having an upstream face and comprising said upstream zone and a second plate having a downstream face and said heater, said first and second plates fluidically connected by said at least one passage; the die plate has a plurality of said at least one passage (Fig 4); a plurality of the at least one passage and wherein said first and second plates are fluidically connected by each of said at least one passage (Fig 4); the die plate has a material selected from brass, stainless steel, and Inconel.TM (see above); the insulation material is selected from high temperature plastics, machineable ceramics, ceramics which may be deposited by spray coating techniques, and ceramics which may be deposited by vapor deposition techniques; the second plate is a retrofit part (Fig 4).

References of Interest

12. Lengerich et al (6,595,765), Lambertus (4,934,916), Bertolotti (4,678,423), Knight et al (6,976,834), Yoshii et al (6,638,045); Wolfe, Jr (4,378,964), Gove et al (3,427,685), Swickard et al (3,461,496), Ready (6,474,969), Matsuo (5,714,173), Mizuno et al (4,178,067), Ishida (6,514,062), Lambertus (4,764,100), Wolfe, Jr (4,752,196), Remscheid (3,749,536), Okita (4,225,547) and Braun (3,516,120) are cited of interest to show the state of the art.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph S. Del Sole whose telephone number is (571) 272-1130. The examiner can normally be reached on M-F 8:30 - 5.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra Gupta can be reached on (571) 272-1316. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Joseph S. Del Sole


JOSEPH S. DEL SOLE
PRIMARY EXAMINER

8/15/06